

Listing of Claims

The following listing of claims replaces all prior listings of claims in this application:

1. (Previously Presented) A diagnostic system comprising:

an immunoassay analyzer;

a clinical chemistry analyzer;

an automatic sample handling device coupled between said immunoassay analyzer and said clinical chemistry analyzer to allow sharing of samples therebetween; and

a processor in communication with said immunoassay analyzer and said clinical chemistry analyzer, wherein said processor commands said immunoassay analyzer and clinical chemistry analyzer to execute immunoassay and clinical chemistry measurements specified by a program executed by the processor in order to facilitate diagnosis of a pathology for a subject according to a reflex algorithm that includes at least one immunoassay and at least one clinical chemistry assay and that represents a hierarchical decision-tree organization of biochemical marker measurement steps, each of the biochemical marker measurement steps specifying a measurement set comprising at least one immunoassay measurement or at least one clinical chemistry measurement or at least one immunoassay and at least one clinical chemistry measurement, wherein at least two of the biochemical marker measurement steps specify non-identical measurement sets, and wherein the hierarchical decision-tree organization includes at least a plurality of paths of the biochemical marker measurement steps wherein at least one of the

plurality of paths of biochemical marker measurement steps includes an immunoassay measurement type and/or a clinical chemistry measurement type not required by another of said plurality of paths of the biochemical marker measurement steps.

2. (original) The diagnostic system according to claim 1, wherein said immunoassay analyzer and said clinical chemistry analyzer each have a respective local processor in communication with said processor, wherein the local processors respectively control execution of measurements specified by said processor on the immunoassay and clinical chemistry analyzer.

3. (original) The diagnostic system according to claim 2, wherein said processor communicates with each of said local processors via a network.

4. (original) The diagnostic system according to claim 3, wherein said network is a public or private network.

5. (original) The diagnostic system according to claim 2, wherein said local processors each independently and selectively execute a local program or subroutine to control a sequence of measurements in response to a command from said processor.

6. (Previously Presented) The diagnostic system according to claim 1, wherein said processor provides information that facilitates the diagnosis of the pathology.

7. (Previously Presented) The diagnostic system according to claim 1, wherein the diagnosis of the pathology for the subject is based, at least in part, on results from the measurements executed according to said reflex algorithm and on additional stored information concerning the subject,

the additional stored information being different from the results from the measurements executed according to said reflex algorithm.

8. (Previously Presented) The diagnostic system according to claim 1, further comprising a hematology analyzer coupled to said processor, and wherein the program further specifies hematology measurements to be executed by the hematology analyzer in response to the hematology analyzer receiving a command from said processor.

9. (Previously Presented) A system for executing a sequence of biochemical marker measurement steps to generate an indication of a pathology, each of the biochemical marker measurement steps comprising measuring at least one concentration level or activity of at least one biochemical marker in at least one of a urine, serum, plasma or whole blood sample, the system comprising:

means for performing an immunoassay measurement;

means for performing a clinical chemistry assay measurement;

means for sample handling between the immunoassay measurement means and the clinical chemistry assay measurement means;

means for storing information representing a reflex algorithm indicating a plurality of predetermined sequences of biochemical marker measurements;

means for receiving information concerning outputs from biochemical marker measurements conducted on the immunoassay means and the clinical chemistry assay means;

means for selectively commanding said immunoassay measurement means and said clinical chemistry assay means to perform a specified biochemical marker measurement according to said reflex algorithm; and

means for specifying an indication of the pathology according to the stored information in response to the information concerning outputs from biochemical marker measurements; and

wherein the reflex algorithm represents a hierarchical decision-tree organization of biochemical marker measurement steps, each of the biochemical marker measurement steps specifying a measurement set comprising at least one immunoassay measurement or at least one clinical chemistry measurement or at least one immunoassay and at least one clinical chemistry measurement, wherein at least two of the biochemical marker measurement steps specify non-identical measurement sets, and wherein the hierarchical decision-tree organization includes at least a plurality of paths of the biochemical marker measurement steps wherein at least one of the plurality of paths of biochemical marker measurement steps includes an immunoassay measurement type and/or a clinical chemistry measurement type not required by another of said plurality of paths of the biochemical marker measurement steps.

10. (Previously Presented) A system for executing a sequence of biochemical marker measurement steps, each of the biochemical marker measurement steps comprising measuring at least one concentration level or activity of at least one biochemical marker in at least one of a serum, plasma or whole blood sample obtained from a subject at a time specified by a reflex algorithm, the system comprising:

immunoassay instrumentation that allows automatic execution of an immunoassay measurement;

clinical chemistry instrumentation that allows automatic execution of a clinical chemistry assay measurement;

a sample handling device coupled between said immunoassay instrumentation and said clinical chemistry instrumentation to allow sharing of samples therebetween;

a computer-readable medium that stores information that represents the reflex algorithm; and

a processor coupled to said immunoassay instrumentation, said clinical chemistry instrumentation, and said computer-readable medium, wherein said processor receives information representative of outputs from biochemical marker measurements conducted on the immunoassay instrumentation and on the clinical chemistry instrumentation, and selectively commands said immunoassay instrumentation and said clinical chemistry instrumentation to execute the biochemical marker measurement according to the reflex algorithm; and

wherein the reflex algorithm represents a hierarchical decision-tree organization of biochemical marker measurement steps, each of the biochemical marker measurement steps specifying a measurement set comprising at least one immunoassay measurement or at least one clinical chemistry measurement or at least one immunoassay and at least one clinical chemistry measurement, wherein at least two of the biochemical marker measurement steps specify non-identical measurement sets, and wherein the hierarchical decision-tree organization includes at

least a plurality of paths of the biochemical marker measurement steps wherein at least one of the plurality of paths of biochemical marker measurement steps includes an immunoassay measurement type and/or clinical chemistry measurement type not required by another of said plurality of paths of the biochemical marker measurement steps.

11. (Previously Presented) The system according to claim 10, wherein said processor selectively provides a suggested diagnostic indication of a pathology according to the reflex algorithm in response to receiving the information representative of outputs from biochemical marker measurements.

12. (Previously Presented) The system according to claim 10, wherein said immunoassay instrumentation and said clinical chemistry instrumentation include a first processor and a second processor, respectively, the first and second processors capable of communicating with said processor.

13-21. (Withdrawn)